FACILITY NAME AND PERMIT NUMBER:
Peirce Island WWTP - NPDES Permit No. NH0100234

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Peirce Island Wastewater Treatment Plant

Mailing Address: Department of Public Works
680 Peverly Hill Rd, Portsmouth, NH 03801

Contact person: Peter Rice P.E.

Title: City Engineer

Telephone number: (603) 766-1416

Facility Address (not P.O. Box): Peirce Island
Portsmouth, NH

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name:

Mailing Address:

Contact person:

Title:

Telephone number:

Is the applicant the owner or operator (or both) of the treatment works?

X owner X operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

_____ facility X applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES NH0100234
PSD
UIC
Other
RCRA
Other

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
Portsmouth	21,233*	Combined	Municipal
New Castle	968*	Separate	Municipal
Rye	70	Seperate	Private
Greenland (Commercial)			
Total population served	22,271		

* 2010 Census population. Aprox 210 Portsmouth residents outside sewered population.

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes _X_ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes _X_ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 4.8 mgd

	Oct 2008 - Sep 2009	Oct 2009 - Sep 2010	Oct 2010 - Sep 2011	
	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	6.17	5.61	5.31	mgd
c. Maximum daily flow rate	18.963	19.966	19.349	mgd

Calculated by taking adding each monthly average effluent flow for the 12 month period divided by 12 months.

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

_X_ Separate sanitary sewer	75 %
_X_ Combined storm and sanitary sewer	25 %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? _X_ Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	1
ii. Discharges of untreated or partially treated effluent	
iii. Combined sewer overflow points South Mill Pond (010A, 010B), Deer St (013)	3
iv. Constructed emergency overflows (prior to the headworks)	
v. Other _____	

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes _X_ No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes _X_ No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes _X_ No

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WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a**, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number: 001

b. Location: Portsmouth (City or town, if applicable); 03801 (Zip Code); Rockingham (County); New Hampshire (State); 43 04.24' N (Latitude); 70 44.34'W (Longitude)

c. Distance from shore (if applicable): 378 ft.

d. Depth below surface (if applicable): 76.24 ft. Below mean lower low tide

e. Average daily flow rate: 5.31 mgd Oct 2010 to Sep. 2011

f. Does this outfall have either an intermittent or a periodic discharge? ____ Yes X No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: ____

Average duration of each discharge: ____

Average flow per discharge: ____ mgd

Months in which discharge occurs: ____

g. Is outfall equipped with a diffuser? ____ Yes X No

A.10. Description of Receiving Waters.

a. Name of receiving water: Piscataqua River

b. Name of watershed (if known): Coastal/Piscataqua

United States Soil Conservation Service 14-digit watershed code (if known): ____

c. Name of State Management/River Basin (if known): Piscataqua-Salmon Falls

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 01060003

d. Critical low flow of receiving stream (if applicable):
acute ____ cfs chronic ____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): ____ mg/l of $CaCO_3$

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A.11. Description of Treatment. 001

a. What levels of treatment are provided? Check all that apply.

_____ Primary _____ Secondary

_____ Advanced x Other. Describe: Chemically enhanced primary treatment

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	30	%
Design SS removal	30	%
Design P removal		%
Design N removal		%
Other _____		%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.
Chlorination by sodium hypochlorite

If disinfection is by chlorination, is dechlorination used for this outfall? x Yes _____ No

d. Does the treatment plant have post aeration? _____ Yes x No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001 Sample period from January 2011 to September 2011

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.1	s.u.			
pH (Maximum)	7.6	s.u.			
Flow Rate	19.349	MGD	5.31	MGD	274
Temperature (Winter)			10.5	C	90
Temperature (Summer)			19.9	C	92

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	209.8	mg/L	131.0	mg/L	72	20th Ed. Standard methods, 5210-B	<5 mg/L
	CBOD-5							
FECAL COLIFORM		1600	#/100 ml	10.6	#/100 ml	271	20th Ed. Standard Methods 9221 B	2/100ml
TOTAL SUSPENDED SOLIDS (TSS)		102	mg/L	71.2	mg/L	68	20th Ed. Standard Methods 2540 D	<2 mg/L

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

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BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

3,400,000 gpd Estimated annual average infiltration/inflow

Briefly explain any steps underway or planned to minimize inflow and infiltration.

The City has prepared and submitted a Wastewater Master Plan in accordance with Consent Decree number 09-cv-283-PB.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ___Yes _X_No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

001

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

_X_Yes ___No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable). See Consent Decree 09-cv-283-PB. Please see AECOMM memo "Technology Evaluation Final Technical Memorandum WWMP Piloting Phase 1 Engineering Evaluation. Based on the May 23 AECOMM Flow Projection Report, the maximum daily inflow rate is 7.6 MGD.

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	___/___/____	___/___/____
– End construction	___/___/____	___/___/____
– Begin discharge	___/___/____	___/___/____
– Attain operational level	___/___/____	___/___/____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ___Yes X No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001 Outfall 001 has TRC monitoring requirements only (samples taken 1 or 2x per day).

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.	Sample period from Jan 2011 to Sept 2011						
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)	0.25	mg/L	.01	mg/L	546	4500-CLG	0.75mg/L
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

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BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

X Basic Application Information packet

Supplemental Application Information packet:

X Part D (Expanded Effluent Testing Data)

X Part E (Toxicity Testing: Biomonitoring Data)

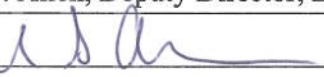
____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

X Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: David S. Allen, Deputy Director, Department of Public Works

Signature: 

Telephone number: (603) 766-1421

Date signed: 12/22/14

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO: